

## **Historic, Archive Document**

Do not assume content reflects current scientific knowledge, policies, or practices.

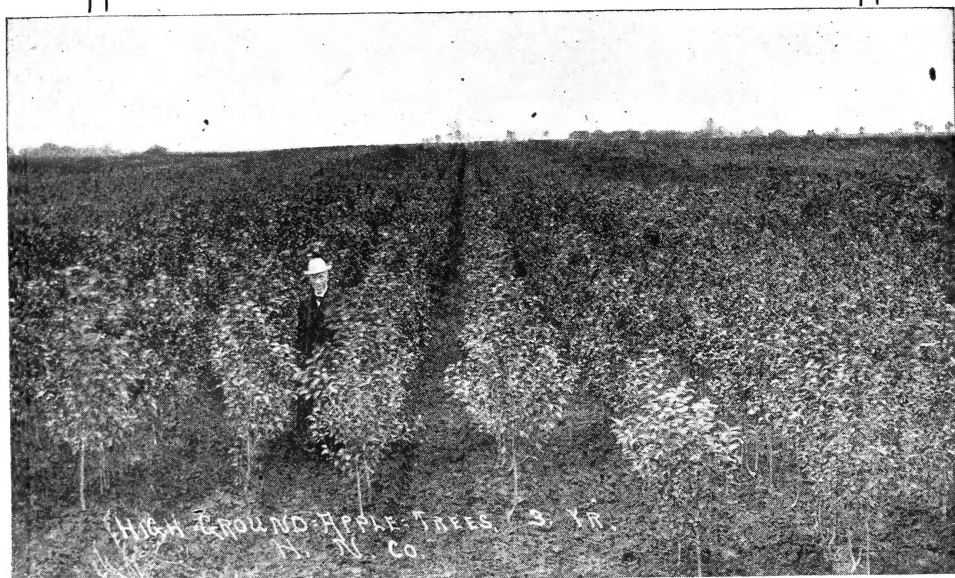


62.31 1712?

L 100  
JUL 29 1920  
U. S. Department of Agriculture

# Is Commercial Orcharding Successful in Nebraska?

According to Bulletin No. 24, issued by Labor Commissioner Louis V. Guye, the Nebraska apple crop for 1911 was worth almost \$10,000,000



NEBRASKA GROWN

The cheapest to buy and the best to plant

**Harrison Nursery Company**

(Incorporated)

YORK, NEBRASKA

## APPLE GROWING.

We are issuing this pamphlet for the purpose of giving reliable information concerning Apple growing in Nebraska as compared with other states.

Before going into detail about Apple growing in Nebraska we wish to give you an idea what is being done elsewhere.

We quote from American Fruits, January 1911. "E. B. Sargent realized \$71,500.00 from a fifty-acre orchard of eleven year old apple trees, located at Fruitland, Idaho.

"The season of 1910 was a most favorable one to the fruit growers of Fremont County, Colorado. In the Canon City district apples formed the principal crop. It is estimated that the crop will approximate 1,000 cars, practically the same as the year 1909, and the value of the apples will not be far from \$1,000,000."

"Several enterprising Virginia apple growers sold their crops last year for from \$10,000 to \$20,000, and the farms from which they were raised did not include more than twenty-five, forty and fifty acres each, the latter being the outside figure. A forty acre apple orchard near Roanoke, was sold last year for \$25,000, another orchard owner there, his orchard being a little larger, was offered \$30,000 for the crop on his trees."

The following is taken from American Fruits, February, 1912:

"Representatives of the Redlands and Yucaipa Land Co. of Los Angeles, California, report that the extensive activity in apple culture in the Yucaipa valley probably will result in planting 1000 acres of land before March."

"Freight records show that 66,400 barrels of apples were shipped from Rockingham, Virginia, this year over the Southern Railway alone."

"More than 14,000 barrels of Canadian and New England apples for the Christmas trade in Scotland, left Boston last year in the holds of the Allen Line steamship Scotian, Captain Thomas Moar. It was the biggest shipment of its kind ever sent from Boston to the Scotch port."

"The Gays Mills Fruit Farm and Nursery Co. has recently been incorporated at Gays Mills, Wisconsin. Of one hundred acres of land acquired at Gays Mills to be set to apples in the near future, twenty-five acres will be planted this spring."

## **\$4,000 ON TWENTY-ACRE ORCHARD.**

A Coffeyville, Kansas, man made \$4,000 this year on twenty acres of apples. That reads pretty well, doesn't it? And he didn't move to Oregon, California or Florida to do it, but applied some degree of the same care and intelligence to the orchard in Kansas that residents of those famous fruit states are compelled to use to raise anything. The money needed to move from Kansas to the "noted fruit states" will more than pay the cost of putting a Kansas orchard in the big profit paying class.—National Nurseryman, 1911.

Does commercial orcharding pay in Nebraska? We quote in part from bulletin issued by Labor Commissioner Guye.

"If you would grow fruit for your livelihood and wish to make each dollar invested bring back the largest possible returns, you must consider the governing, growing conditions that give color, flavor, size texture and keeping qualities. Soil, sunshine, rainfall, shelter, drainage and elevation, each and all being essential to successful fruit growing if backed by a stout heart, willing hands and a moderate amount of gray matter of average quality.

Shrewdness or smartness on the part of the grower is not the requisite, but rather intelligence, industry and faithful appliance. The necessary knowledge is readily obtainable and its success depends upon its application. The first point to be understood is that fruit growing requires just as much attention, time and energy as the raising of corn, wheat, horses, hogs and alfalfa.

## **NEBRASKA AN APPLE PRODUCING STATE.**

The apple is as staple a fruit food as wheat is a grain food. Everybody eats apples, providing they can get them, and yet apple production in the United States has diminished in the past ten years while the markets have increased.

In 1896 the United States produced 69,000,000 barrels of apples. In 1904-5-6 an average of 45,000,000. In 1907-8-9-10 an average of 28,000,000. The diminishing production of apples being due, largely to the fact that the apple growing is being developed along scientific lines just like stock, grains and other staples. The breeding of swine has long since replaced the rail splitter; the thoroughbred

dairy herd, the lanky ranger; and the acclimated cereals the forage seeding of the old days.

Fruit raising, heretofore, has been considered a bi-product of the farm. Its culture consisting chiefly in planting and picking without care or attention. Like other staple foods, those who were making a business of fruit growing have scientifically developed flavors, size, color and quality through the scientific methods of pollination, grafting, etc. aided by the system of pruning, spraying, fertilizing and cultivation. Like the development of the standards of other food articles as soon as the cultured fruits were placed upon the markets the price and demands for the uncultured diminished. Hence the farmers and untrained fruit growers have abandoned the orchards and have satisfied their own conscience by convincing themselves that fruit growing was too scientific or that the soil or climate is not adapted to the growing of such crops, especially has this been true in Nebraska."

We quote in part Val Keyser's article on "Renewing an old apple orchard," in Nebraska Horticulture of January, 1912.

"The writer has had personal experience in pruning, cultivating, spraying, smudging, harvesting and marketing a crop of apples from one of these renewed orchards which produced at the rate of 500 bushels per acre. What has been accomplished in one orchard can be duplicated in hundreds of better located orchards along the Missouri river. Here lies a territory that presents greater opportunities for profitable fruit production than have ever been thought of in the golden West. All that is necessary to spell success is to use the methods of the Western fruit grower, who has been the greatest educator along lines of scientific fruit production. This section of the country has one great advantage over many of the far-famed fruit districts of Western states. The natural rainfall furnishes abundance of moisture and the drudgeries of irrigation are dispensed with.

Apple growing both by the renewing of orchards already planted but sadly neglected, and by planting of new prospects is destined to put the states of Iowa, Nebraska, Missouri and Kansas on the map as the great fruit producing states of the Union. The East and West will see the time when they will take off their hats to this section of the country."

The Nebraska Cherry crop for 1911 was estimated at \$860,058.

Grapes, Strawberries, Plums, Blackberries and other small fruits were estimated at \$500,000.

To give you an idea what is being done in different parts of the state we quote the following from Nebraska State Journal of February 22, 1912:

“Apples now take fourth place in Nebraska’s crop production, having surpassed barley, rye and potatoes, as shown by statistics of the 1911 yield, appearing in a printed bulletin on fruit growing and bee culture, which the state labor bureau has just issued.

The total crop of apples in the state last year, by this exhibit, was 9,935,889 bushels. Their value is estimated at \$1 per bushel, or \$9,935,889. They were grown from 3,436,124 trees, making the production about 2.9 bushels for each tree.

Wayne county takes first place in the list with nearly a million bushels. Cass and Otoe are close together for second honors with over three-quarters of a million bushels each. Washington, Richardson, Nemaha and Douglas, all bordering on the Missouri river, are next in the order given. This territory, not counting Wayne county, forms a continuous strip along the east side of the state.

Antelope has more apple trees than any other, but the crop there was very light, as a good many orchards are not yet old enough to bear. Within a year or two it will probably take rank with the leaders in production.

### PRODUCTION BY COUNTIES.

Here are the figures by counties, the number of trees being taken from assessors’ reports and the yields from crop estimates:

Counties.	No. of Trees.	Bushels
Adams .....	33,508	33,508
Antelope .....	160,016	8,008
Banner .....	1,772	443
Blaine .....	1,024	256
Boone .....	59,284	88,926
Box Butte .....	165	41
Boyd .....	21,881	10,940
Brown .....	11,800	5,900
Buffalo .....	42,237	31,677

Counties.	No. of Trees.	Bushels.
Burt .....	74,466	372,330
Butler .....	63,152	252,608
Cass .....	129,961	779,766
Cedar .....	40,551	81,102
Chase .....	2,588	647
Cherry .....	5,186	1,296
Cheyenne .....	1,111	277
Clay .....	43,504	43,504
Colfax .....	36,242	72,484
Cuming .....	42,690	170,760
Custer .....	60,216	30,108
Dakota .....	27,039	81,117
Dawes .....	3,002	750
Dawson .....	17,805	13,353
Deuel .....	737	184
Dixon .....	30,775	76,937
Dodge .....	55,207	276,035
Douglas .....	77,042	462,252
Dundy .....	2,553	638
Fillmore .....	82,939	82,939
Franklin .....	968	726
Frontier .....	5,931	1,482
Furnas .....	11,456	2,864
Gage .....	117,971	353,913
Garden .....	1,045	261
Garfield .....	17,613	4,403
Gosper .....	5,619	1,404
Grant .....	242	60
Greeley .....	20,475	10,237
Hall .....	45,325	45,325
Hamilton .....	61,685	61,685
Harlan .....	11,476	2,869
Hayes .....	2,236	559
Hitchcock .....	2,342	585
Holt .....	63,942	31,971
Hooker .....	344	86
Howard .....	30,390	30,390
Jefferson .....	61,224	122,448
Johnson .....	83,830	335,320
Kearney .....	31,446	31,446
Keith .....	2,352	588
Keya Paha .....	8,129	2,032
Kimball .....	473	118



Counties.	No. of Trees.	Bushels.
Knox .....	24,717	24,717
Lancaster .....	113,362	340,086
Lincoln .....	9,785	2,446
Longon .....		
Loup .....	7,183	1,953
Madison .....	69,063	69,063
McPherson .....	731	182
Merrick .....	17,623	17,623
Merrill .....	1,000	250
Nance .....	28,936	43,405
Nemaha .....	127,359	509,436
Nuckolls .....	44,908	44,908
Otoe .....	109,198	764,386
Pawnee .....	74,450	260,575
Perkins .....	1,056	264
Phelps .....	13,963	13,963
Pierce .....	23,167	23,167
Platte .....	85,613	85,613
Polk .....	51,252	102,504
Red Willow .....	5,802	2,901
Richardson .....	136,944	547,776
Rock .....	11,586	2,896
Saline .....	99,083	198,166
Sarpy .....	61,349	368,094
Saunders .....	108,019	432,076
Scott's Bluff .....	2,597	649
Seward .....	75,831	151,662
Sheridan .....	6,425	3,212
Sherman .....	26,490	26,490
Sioux .....	2,487	621
Stanton .....	29,256	43,884
Thayer .....	46,227	46,227
Thomas .....	720	180
Thurston .....	6,166	12,332
Valley .....	33,347	33,347
Webster .....	41,090	41,090
Washington .....	100,022	600,132
Wayne .....	38,541	963,525
Wheeler .....	12,838	64,190
York .....	72,291	72,291
Total 1911.....	3,436,124	9,935,889

## **TWELVE MILLION QUARTS OF CHERRIES.**

The bulletin estimates that 12,286,551 quarts of cherries were gathered in Nebraska last year, which at 7 cents a quart made the crop worth \$860,058.00

The aggregate production of grapes, strawberries, peaches, plums, blackberries and other small fruits is placed at \$500,000 in value.

A few facts relative to what individual fruit growers have done during the past year are reported in the publication. Here they are:

J. D. Maxey of Peru sold \$225 worth of strawberries from one-third of an acre.

John Furnas of Brownville made on strawberries a net profit of \$700 per acre.

William Bollstorff of Peru sold \$300 worth of blackberries off of one-half acre.

John Meek of Peru reports \$125 average per acre off of grapes for the past ten years.

H. R. Howe's 50-acre apple orchard at Auburn netted him \$7000. as his share.

H. C. Smith, at Barada, Richardson county, has a 65-acre orchard which netted \$7,500 profit, as his share, last year. This orchard was handled in a scientific manner, being sprayed six times, the result being that the fruit was clean, uniform, smooth and of good size. The varieties were Ben Davis, Jonathan, Gano and Winesaps, and the entire crop found a ready market."

One of our Horticultural exchanges declares there will always be markets for apples. There never can be an over-production of a good article of this fruit, and that it is impossible at the present time to produce the quality of good apples needed to meet the demand. This is made more positive by the fact that England, Germany, France, Denmark, Australia and the Far East are now calling for apples from the orchards of the United States.

We may well appeal to farmers to give their orchards more attention. In order to obtain the best results in apple growing it is absolutely necessary to spray the trees. It takes but little time and little expense to spray, and the result is most gratifying; it gives you a number one apple instead of a windfall, one that will demand the highest price. We quote an article on spraying by Prof. Howard of the Nebraska Experiment station from the Lincoln Daily Star.

“In every fruit growing locality there are men who refrain from growing apples merely because they have the idea that it is an exceedingly expensive and complex operation to protect the trees and crops from their natural insect and fungous enemies.

This attitude not only characterizes a class of men not actually in the business, but it applies to a certain class of orchard owners. In general this is not true of our largest growers—men who have most of their interest and capital in the business. They have found, as men will find in every line of business when their future depends upon the success with which it is operated, that a certain amount of attention is as necessary to successful fruit growing as it is to growing any other crop. On the other hand the number of apple trees in this state not receiving this attention probably aggregate more than those in “commercial orchards.” Men who are familiar with the apple growing industry in the central west know it is useless to attempt to grow apples now free from insect and fungous blemishes without spraying. The early settlers did not have to give their trees this attention. They were able to grow fruit free from these things because fruit tree pests, like many of our social evils, are not known until civilization is fairly well established. In a way this is unfortunate for it usually takes a generation to get any new agricultural practice into operation after its need becomes evident.

The department of horticulture of the University began a series of spraying experiments and demonstrations eight years ago in eastern Nebraska on apple orchards to show the growers the beneficial effects of spraying to produce fruits free from these pests and to determine just what its cost would be under Nebraska conditions. This work was carried on in twenty-two orchards, representing eighteen localities in thirteen counties. The conclusions drawn from this work are based on the results under all sorts of conditions extending over this period.

Apple scab and the codling-moth worm are the two most troublesome pests the growers have to contend with in this state. The apple scab is a fungous disease that develops rapidly under certain favorable weather conditions and infects both the leaves and fruits of most of our cultivated varieties of apples. It makes its appearance about the time the trees are in bloom causing numerous brown patches upon the leaves and a scabby like growth upon the fruits. The worm so often found inside the apples is the larva of a small

moth. This pest has reached such a stage of development in eastern Nebraska that we cannot expect to get more than 10 to 15 per cent of the apples free from the worms without spraying.

Four sprayings are necessary to hold these two troublesome pests in check. Spraying to prevent apple scabs should be regarded as a preventative and not as a cure, for when the disease once gets into the tissues of the plant any spray material that we could use with safety to the tree would not stop its development. The object then is to thoroughly coat all parts of the tree with something that will prevent the spores from germinating. The materials most commonly used for this purpose are lime sulphur solution or Bordeaux mixture. Lime sulphur is a commercial preparation that may be bought on the market in a concentrated form. It should be diluted about thirty times before being put on apple trees. As a similar spray, bordeaux mixture may be made by slacking four pounds of store lime in a small quantity of water and diluting it to twenty-five gallons and then adding to it twenty-five gallons of water in which four pounds of copper sulphate (blue stone) has been dissolved. Lead arsenate in the proportion of two pounds to fifty gallons of spray material is used for controlling the worm.

The first application is for scab only and should consist of either lime sulphur or bordeaux mixture. The proper time for making the first application is just before the flowers open. The second application should consist of the same material as the first application plus two pounds of lead arsenate dissolved in each fifty gallons and should be put on immediately after the flowers begin to drop. This is the most important spraying and it should be directed downward and with as much force as possible in order to get some of the poison into the blossom end of the apple before the little lobes cross. About three weeks later, the second spraying should be repeated. The fourth and last application should be given about the middle of July and should consist of lead arsenate and water two pounds to fifty gallons.

The department of horticulture found that the cost of these four applications, including the cost of all material and labor was about twenty-four cents per tree. A grown apple tree on an ordinary year should bear over five bushels, making the cost of producing clean fruit free from worms less than five cents per bushel.

There is no better land for apple growing to be found anywhere than in eastern Nebraska. This is especially true of those counties bordering the Missouri river from Burt to the extreme southeast corner of the state, including Nemaha and Johnson counties. Considering the cheapness of some of this bluff land, one wonders why so many investors from this state, who are anxious to go into the fruit business are rushing to the western states where the raw land alone is costing them three to five hundred dollars per acre. Orchards on our Missouri river bluff lands, if given the same good care that characterizes western methods, will produce fruit equal in quality to any fruit growing region in America. Where western competitors have to pay approximately fifty cents per bushel to get their product to the markets, we have our own markets here at our very door.

No better evidence could be cited that eastern Nebraska possesses real merit as an apple producing section, than the fact that some of the best growers in the state and of the state horticultural society are leasing every available orchard in this region."

### **NEBRASKA RAISED MORE APPLES THAN THE WHOLE NORTHWEST RAISED IN 1910.**

When F. G. Odell came home from the northwest a few months ago and said that Nebraska produced more apples than the much advertised lands of Washington he was decorated with the short and ugly word all the way from the Rocky mountains to the Puget Sound. He said nothing but waited for statistics. Yesterday he was able to quote from the assessor's returns from Nebraska for 1911 and from the report of the statistical bureau of the agricultural department at Washington.

"Last year," he says, "Nebraska raised more apples than the whole northwest raised in 1910. That is to say, this one state raised more apples than the states of Washington, Oregon, Colorado, Idaho, Montana and Utah. Ten counties in eastern Nebraska raised five millions of dollars worth of apples alone. In the Grand Valley of Colorado orchard land sells as high as \$4,000 an acre. Five Nebraska counties raised more apples than the entire Grand Valley and did it on hundred dollar land.

"Either Cass or Otoe county produced more apples than the whole state of Utah.

“Either Nemaha or Richardson produced more apples than Montana.

“These four counties together raised more apples than Oregon or Colorado.

“With Washington county, these four Nebraska counties raised more apples than the whole state of Washington.”—Lincoln State Journal, July 10, 1912.

We think the above facts prove beyond a question of a doubt that COMMERCIAL ORCHARDING IS SUCCESSFUL IN NEBRASKA.

There is one more important point which we wish to call your attention to before closing, that is:

In selecting apple trees you should be careful to see that they have been grown on high ground. Do not spend money and time in planting trees that have been forced. You do not go to draws nor low lands for seed corn, neither should you go there for your trees.

The Harrison Nursery is located on a high divide where it is impossible to force the growth of trees. The ground is adapted to the growing of a strong vigorous root system.

Now is the time to place your order while we have a supply of everything on hand.

**GROWN**

*The cheapest to buy  
and the best to plant.*

*Harrison Nursery Co.,  
York, Neb.*